

FINAL REPORT

**Marine Endangered Species Monitoring Program
US Army Corps of Engineers
Galveston District
Contract #: W912HY-04C-0006**

**Maintenance Dredging
Matagorda Bay, Texas**

Dates: 18 January 2004 – 06 February 2004



Submitted by:

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ABSTRACT

A twenty-four hour per day marine endangered species monitoring program was conducted onboard the hopper dredge *Atchafalaya* during the Matagorda Bay, TX maintenance dredging project from 18 January through 06 February 2004. Endangered and threatened sea turtles *Caretta caretta* (loggerhead), *Chelonia mydas* (green), *Lepidochelys kempii* (Kemp's ridley), *Dermochelys coriacea* (leatherback) and *Eretmochelys imbricata* (hawksbill) were the species targeted. A total of one take was recorded; a whole juvenile *Chelonia mydas* (green) sea turtle.

INTRODUCTION

The REMSA Inc. Marine Endangered Species Observer Division was subcontracted by B+B Dredging in the Galveston District to monitor the impact of dredging on endangered sea turtle species in the area of the dredge operation. Pursuant to agreements with the National Marine Fisheries Service (NMFS), two certified observers were required onboard during the months of prime sea turtle activity for that area to document any detected incidents involving target species.

SCOPE OF WORK

REMSA provided the necessary trained personnel and equipment to clean and monitor inflow screens onboard the hopper dredge *Atchafalaya* and to complete the necessary reports. Monitoring was performed 24 hours each day from 18 January 2004 through project completion on 06 February 2004. Observers inspected and cleaned all inflow and overflow screens, and inspected the draghead each time it was brought on deck for cleaning and maintenance. Any death or injury involving target species, the loggerhead turtle (*Caretta caretta*), green turtle (*Chelonia mydas*), Kemp's ridley turtle (*Lepidochelys kempii*), leatherback turtle (*Dermochelys coriacea*), and hawksbill turtle (*Eretmochelys imbricata*) were to be identified, logged, measured, photographed and tissue sampled. A load sheet was completed for each load whether or not turtle parts were found. In the case of an incident or take involving a sea turtle, incident report forms were to be completed and the observers were to contact NMFS and the ACOE within twenty-four hours of the incident. Daylight bridge watch was conducted during periods when the observer was not occupied with screen cleaning duties. Observers ensured that dredge crew personnel were aware of the need to avoid incidents involving any endangered animal, and that civil and criminal penalties are possible for harming or harassing endangered species.

METHODS

Dredging by the hopper dredge *Atchafalaya* began when the observers arrived onboard on 18 January 2004 and continued through 06 February 2004 in Matagorda Bay, Texas. Two certified observers were present onboard the dredge during all dredging operations working 12 hour shifts.

The Dredge *Atchafalaya* functioned with 100% inflow screening and a sea turtle draghead deflector. The screening baskets were fitted with 4" x 4" screening material to

insure that parts of targeted species would not be allowed to flow through into the hopper. The draghead and screening basket was checked after each load of the observers 12-hour shift. The appropriate forms were filled out, noting any incidents regarding targeted species as well as the marine life present in the inflow and overflow boxes.

A bridge lookout was maintained during those daylight hours that the observer was not on deck checking screens. Watch was kept for turtles in the dredging area and dump site.

RESULTS

There was one reported incident during the monitoring project at Matagorda Bay, Texas, to dredging activity. The incident was a whole Green (*Chelonia mydas*) sea turtle recovered in the port screening basket on load #100 (21 January 2004). Proper incident reports were completed and faxed to NMFS (Appendix 1) and the ACOE. A tissue sample was also taken and sent to Lisa Belskis of NMFS.

The mean sea temperature during this period averaged fifteen degrees 15 ° Celsius with a fluctuation of +/- 2°C. Due to the nature of the material being dredged, there was no recorded biological by-catch in the discharge box.

Dredge Take
Matagorda Bay, Texas
24 January 2004, Load #100
Chelonia mydas



SUMMARY

On 18 January 2004, the hopper dredge *Atchafalaya* began dredging in Matagorda Bay, Texas. Dredging was conducted for a total of twenty days with a total of 238 loads. On 24 January 2004 (load #100), the observer on the dredge *Atchafalaya* reported a sea turtle take. The specimen found was a whole juvenile green (*Chelonia mydas*) turtle. The turtle was recovered from the port screening with a cracked carapace. Information was recorded and copies were made for B+B dredging, NMFS, and ACOE.

If there are any questions regarding this report please feel free to contact me at the number below.

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Appendix 1

Sea Turtle Incident Reports

ENDANGERED SPECIES OBSERVER PROGRAM

SEA TURTLE INCIDENTAL TAKE DATA FORM

USACE DISTRICT: Galveston Corpus Christi TX

PROJECT NAME: Matagorda Bay, TX

DREDGE NAME: Atcha Palayq

DATE: 24 Jan 2004 Time turtle take recovered (24hr): 2320 Turtle take # for project: 1

LOAD #: 100 Times (24hrs): Start 2211 End 2320 Load start date 24 Jan 2004

SPECIES OF TURTLE TAKE: Unknown Loggerhead Green Kemp's ridley Hawksbill Leatherback

Channel location of take: Latitude 28° 24.41 Longitude 96° 18.36

Other location / Channel description (e.g. buoy markers, landmarks): Matagorda Bay Channel TX
Between Buoys 3-5 & 4-6

Location take recovered on dredge: Lander

Number of dragheads in use at time of incident: 1 Draghead deflector? YES X NO

Condition of deflector: Excellent Condition of screening: Excellent

Beaufort Sea State: 0 1 2 3 4 5 6 7 8 9 10 11 12

AIR TEMP: 18°/64° °C/°F (°F = 9/5 (°C) + 32; °C = 5/9 (°F - 32))

WATER TEMP: Surface 14°/56° °C/°F Column (mid-depth) °C/°F Bottom °C/°F

Condition of specimen: Fresh kill / whole with crack in carapace

0 = Alive; 1 = Fresh dead; 2 = Moderately decomposed; 3 = Severely decomposed; 4 = skeleton/old bone; 5 = undetermined

Sex: M F UN How determined? Age class: Juv X Sub-Adult Adult UN

Measurements: Circle units

Plastron Length: 31.6 cm cm/in

Head Width: 5 cm cm/in

Carapace Straight Length: 39 cm cm/in

Plastron Width: 33 cm cm/in

Carapace Curved Length: 39.2 cm cm/in

Carapace Straight Width: 34.6 cm cm/in

Carapace Curved Width: 38.3 cm cm/in

Measurement/description of part:

Genetic samples taken: YES X NO Photos taken: YES X NO

Turtle tagged?: YES NO X Tag type: NA Tag #: NA Tag date: NA

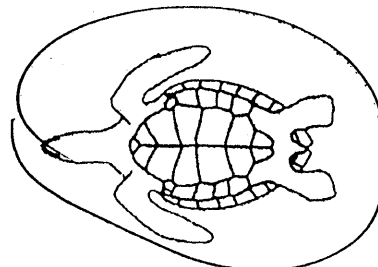
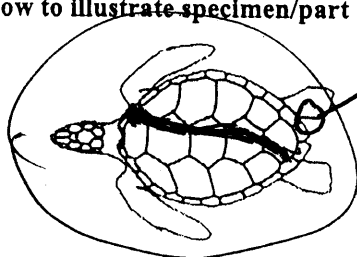
Final disposition of specimen: Frozen then disposed at dump site

Comments:

Load data form attached: YES X NO Dredge load log attached: YES NO X

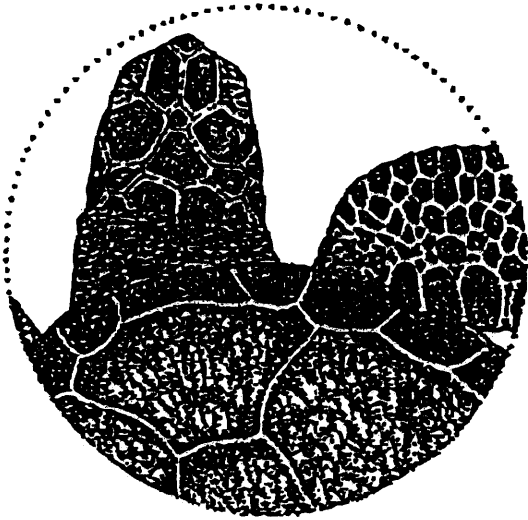
Observer's name Karen Underkoffler

Use diagrams below to illustrate specimen/part recovered:

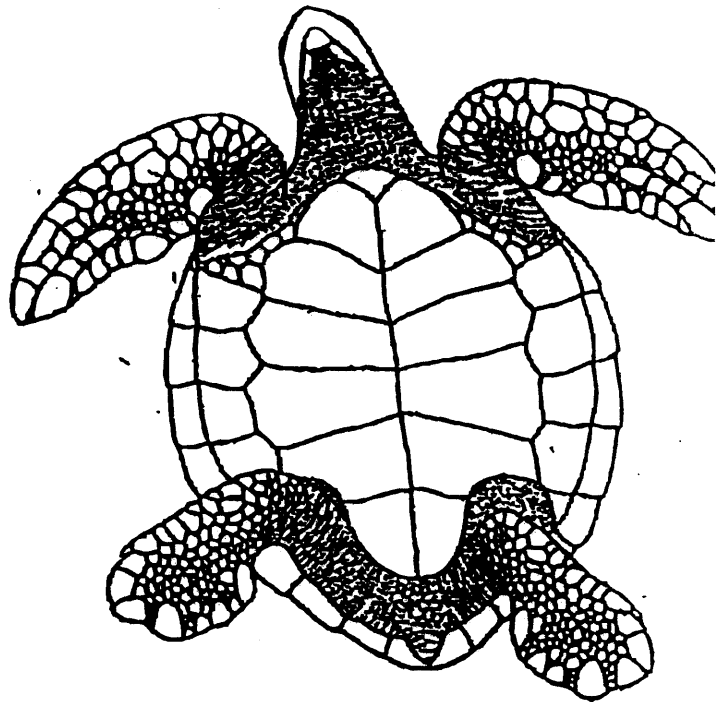
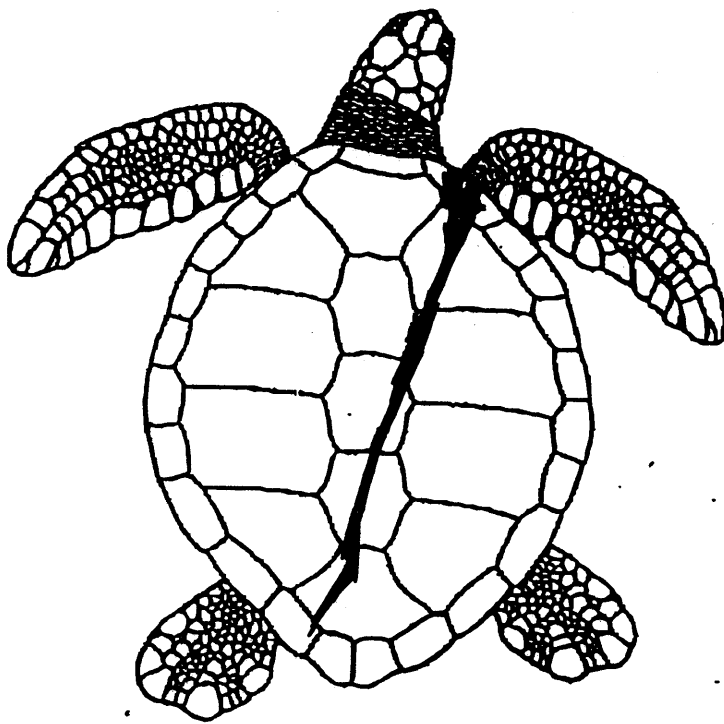


Chelonia mydas (green turtle)

Shade areas of turtle that are missing. Sketch cracks and lacerations.



Comments: Complete specimen with
large crack across carapace



ENDANGERED SPECIES OBSERVER PROGRAM

LOAD DATA FORM

USACE DISTRICT: GALVESTON / CORPUS CHRISTI TXCONTRACT #: W912HY-04-C-0006 Maintenance X / New Work PROJECT start date 18 JAN 2004PROJECT NAME: MATAGORDA BAY, TXDREDGE NAME: ACHAFALAYADREDGE FIRM: TB BLOAD #: 100 LOAD start date: 24 Jan 2004 Times (24hrs): Start End Condition of screening: Port GOOD Starboard N/A Overflow N/ANumber of dragheads in use: 1 Type of dragheads used: MUD HEAD Size of dragheads: 550 mmDraghead deflector? YES X NO Condition of deflector: EXCELLENTType of material dredged: MUD AND SANDWeather conditions: Humid NightTidal stage (CIRCLE ONE): Slack Rising High Falling Low Unknown

Beaufort Sea States (Winds/Wave Height) (CIRCLE ONE)

0 = <1 kno/0 ft	3 = 7-10 kno/2 ft	6 = 22-27 kno/10 ft	9 = 41-47 kno/23 ft	12 = >63 kno/45 ft
1 = 1-3 kno/0.25 ft	<u>4 = 11-16 kno/4 ft</u>	7 = 28-33 kno/14 ft	10 = 48-55 kno/29 ft	
2 = 4-6 kno/0.5 ft	5 = 17-21 kno/6 ft	8 = 34-40 kno/18 ft	11 = 56-63 kno/37 ft	

Waves: 4-6 ft Wind (speed & direction): 15SAIR TEMP: 18°/64° °C/°F (°F = 9/5 (°C) + 32; °C = 5/9 (°F - 32))WATER TEMP: Surface 19°/56° °C/°F Column (mid-depth) °C/°F Bottom °C/°F

SCREEN TYPE	<u>X</u>	Inflow screening:	None	25%	50%	75%	<u>100%</u>
		Overflow screening:	<u>None</u>	25%	50%	75%	100%
		Other screening:	<u>None</u>	25%	50%	75%	100%

PORT SCREEN CONTENTS: Juvenile Chelonia mydasSTARBOARD SCREEN CONTENTS: N/A

Estimate number entrained on this load for the following:

Sturgeon (any species) Shark (any species) Horseshoe crab Blue crab TURTLE OR TURTLE PARTS PRESENT THIS LOAD: YES X NO SPECIES OF TURTLE TAKE: Unknown Loggerhead Green Kemp's ridley Hawksbill LeatherbackComments: whole / fresh / cracked carapaceNumber observers used/24hrs: 2 % Monitoring/24 hrs: None 25% 50% 75% 100%Observer's name: Karen UnkoffObserver signature: Karen UnkoffObserver firm: REMSEA